



STATE OF TENNESSEE  
**DEPARTMENT OF ENVIRONMENT AND CONSERVATION**

Division of Water Pollution Control  
7<sup>th</sup> Floor Life and Casualty Annex  
401 Church Street  
Nashville, Tennessee 37243

November 17, 2008

Lamar Tucker, Chairman  
Giles County Southern Water Authority  
PO Box 222  
Elkton, TN 38455

**Subject:** Tennessee Antidegradation Statement  
Water Withdrawal from Richland Creek, Giles County  
Determination of Economic/Social Necessity to Allow Degradation

Dear Mr. Tucker:

The Giles County Southern Water Authority has asked the department to determine that the proposed degradation of Exceptional Tennessee Waters is justified. The Authority has the burden of establishing to the department that a change is justifiable as a result of necessary economic or social development and will not interfere with or become injurious to any existing classified uses.

Tennessee's water quality standards require that we examine alternatives to degradation. In this case, the entire service area of the Authority's proposed treatment plant is presently served by an existing provider, the City of Pulaski. The City has unused treatment capacity to last the service area well into the future. A significant proportion of the City's customer base is its wholesale distribution, the loss of which would cause a critical economic impact. Because of the negative economic impact to the City, we find that the proposed lowering of water quality is not justified.

The attached notice describes this determination and also includes a tentative determination to deny the permit on this basis. As required by regulation, we must provide the public with notice of and an opportunity to comment of this tentative denial decision.

This determination cannot be appealed. However, an appeal can be made of the division's final permit action that follows the opportunity for comment and hearing on the determination of social and economic justification. Please contact Robert Baker at 615-532-0710 or [robert.d.baker@state.tn.us](mailto:robert.d.baker@state.tn.us) for information concerning this matter.

Sincerely,

Paul E. Davis, P. E.  
Director

Encl.

Cc: Ryan Owens, Columbia Environmental Field Office  
Brad Bishop, U.S. Army Corps of Engineers, Nashville District  
Lee Barclay, U.S. Fish and Wildlife Service, Cookeville, TN  
Rob Todd, Tenn. Wildlife Resources Agency, Nashville, TN  
Tom Welborn, U.S. Environmental Protection Agency, Atlanta, GA  
Daniel H. Ferry, Tennessee Valley Authority  
Public Meeting Attendees  
File copy

# **PUBLIC NOTICE**

**November 17, 2008**

## **Notice of Determination of Economic or Social Necessity**

### **Giles County Southern Water Authority - proposed Richland Creek drinking water withdrawal, Giles County, Tennessee**

This notice presents the determination of the Tennessee Department of Environment and Conservation, Division of Water Pollution Control, on the justification of degradation of Exceptional Tennessee Waters based on economic or social necessity.

Degradation is not allowed in Exceptional Tennessee Waters unless it is demonstrated that a change is justified as a result of necessary economic or social development and will not harm the uses of those waters.

The application described below has requested the department to determine whether or not the proposed degradation of an Exceptional Tennessee Waters is justified.

#### **APPLICANT:**

Giles County Southern Water Authority  
Lamar Tucker, Chairman  
PO Box 222  
Elkton, TN 38455  
931-468-2875  
file # NRS05.411

#### **LOCATION:**

Richland Creek at Aspen Hill Bridge, river mile 12.2, near Aspen Hill in Giles County, 35.113449°N, -87.002492°W

#### **PROJECT DESCRIPTION:**

The Giles County Southern Water Authority has applied for an aquatic resource alteration permit to withdraw raw water from Richland Creek at Aspen Hill Bridge, River Mile 12.2 for the purpose of providing an additional drinking water source for the area. The request is for 2.5 million gallons per day (mgd) at a rate of 5.8 cubic feet per second (cfs) over 16 hours.

The withdrawal of water from Richland Creek would be part of a phased approach to implementing a new raw water source. Phase one of the plan consists of a 2 mgd water treatment facility located in the new industrial park south of Pulaski along with a 2.5 mile long raw water transmission main to Richland Creek and a water intake structure at the Aspen Hill Bridge located on Richland Creek at river mile 12.2. Phase two of the plan includes expansion of the water treatment plant and the extension of the raw water transmission line to the Elk River where a new water intake structure would be built at river mile 36. As a part of this phase of work, the Richland Creek intake would be converted to a booster station and all raw water would then be drawn from the Elk River.

The Authority submitted data and information to the department in support of their proposal. The Authority presents its concerns as follows:



- the area proposed to be serviced by its new water plant currently has treated water available – however, the existing water provider will not be able to meet the supply demands in the long term;
- there is much uncertainty regarding rate structures and contractual arrangements with the existing provider, and;
- the Authority has concern for the standard of quality of the drinking water from the existing provider.

#### **WATERSHED DESCRIPTION:**

Richland Creek at this location has a watershed of about 421 square miles. Its drought flow is about 18 cfs. The lower portion of Richland Creek is designated as Exceptional Tennessee Waters based on the presence of two species listed under the Federal Endangered Species Act as endangered: the Eastern Fanshell Pearly Mussel (*Cyprogenia irrorata*) and the Boulder Darter (*Etheostoma wapiti*).

Recent data shows that existing crop irrigation withdrawals total about 10.5 cfs in the lower Richland Creek drainage from river mile 0.9 to 20.5, with potential for additional future irrigation withdrawal.

The following data is from the division's most recent stream assessment.

<b>Watershed:</b>	Elk-Lower	
<b>Hydrologic Unit Code:</b>	06030004	
<b>Stream Name:</b>	Richland Creek	
<b>Stream Segment ID:</b>	TN06030004017_2000 (Silver Creek to Dry Weakley Creek)	
<b>Designated Use</b>	<b>Use Support</b>	<b>Causes</b>
fish and aquatic life	not supporting	sedimentation/siltation, oil & grease
recreation	not supporting	Escherichia coli
industrial water supply	fully supporting	
irrigation	fully supporting	
livestock watering and wildlife	fully supporting	
<b>Assessment Dates:</b>	1999, 2004, 2006	
<b>Ecoregion:</b>	71h	

#### **TENNESSEE ANTIDEGRADATION STATEMENT:**

The downstream segment of Richland Creek, from the mouth at Elk River to river mile 4.8 (confluence with Silver Creek), is designated as Exceptional Tennessee Waters (ETW). The division has determined that the proposed withdrawal will lower water quality (degradation) in the ETW segment of Richland Creek.

In accordance with the statement, where reasonable alternatives to degradation to an ETW are not feasible, applicants may ask the department to determine that the proposed degradation is justified on the basis of economic or social necessity. The applicant shall have the burden of establishing to the department that a change is justifiable as a result of

necessary economic or social development and will not interfere with or become injurious to any classified uses existing in such waters.

The department's decision consists of the following components: (1) determination of applicability of ETW process, (2) alternatives analysis, (3) weighing of socio-economic vs. water quality issues, (4) public review/input prior to (5) a final decision.

**DETERMINATION OF ECONOMIC/SOCIAL NECESSITY:** The department has determined that the ETW process does apply. The proposed withdrawal will result in degradation in the ETW segment of Richland Creek, because the removal of 5.8 cfs from the drought flows of about 20 cfs is more than insignificant and represents a lowering of water quality.

The department has also determined that the proposed degradation is not justified on the basis that the existing and projected potable water demand can be met with treatment capacity already existing within the Authority's proposed area of service.

The City of Pulaski owns and operates a water treatment plant within its city limits. This plant currently provides treated water on a wholesale basis to the nearby utility districts for distribution. The volume of water distributed wholesale represents between 40% and 50% of the treated water produced by this plant. This plant was recently expanded to a 7.0 million gallon per day capacity, based on long term projected demand of this customer base. The reported cost of this expansion was \$8,000,000, funded by an issuance of bonds. Pulaski's ability to service this debt and fund the depreciation on the system improvements is dependent upon the expanded customer base. The loss of this customer base would result in significant, negative economic impact to the City of Pulaski and its remaining rate-payers.

The Authority is concerned with rate structures charged by the City for wholesale distribution along with the inability to secure contracts. Our investigation shows that the City's present wholesale water rate is normal for Tennessee, being well under \$2.00 per thousand gallons.

Another concern is the quality of the drinking water provided to the wholesale distributors over which the distributor has no control. The water sold by the distributor must meet water quality standards as governed by *The Tennessee Safe Drinking Water Act*. We have no reason to believe that the City's treatment plant cannot provide treated water that will meet Tennessee's drinking water standards.

We do not agree that the new source is justified on the basis of wholesale water rates or matters of drinking water quality. Based on the existing alternative and the negative economic impact to the City of Pulaski, we have determined that the proposed change in water quality is not necessary to social and economic development for the Giles County region.

**TENTATIVE PERMIT DETERMINATION:** Because of the determination that degradation is not justified, the department has tentatively determined to deny the Aquatic Resource Alteration Permit. The purpose of this notice is to inform interested parties of the permit application described above and to ask for comments and

information regarding the department's determination on the tentative decision to deny this proposal.

Persons wishing to comment on the department's tentative determination to deny the permit are invited to submit written comments. Written comments must be received within thirty days of the date that this notice is posted. Comments will become part of the record and will be considered in the final decision. The applicant's name and permit number should be referenced.

Interested persons may also request in writing that the department hold a public hearing on the tentative determination to deny the permit. The request must be filed within the comment period, indicate the interest of the person requesting it, the reasons that the hearing is warranted, and the social and economic issues being raised. When there is sufficient public interest in social and economic issues, the department will hold a public hearing.

The permit application, supporting documentation including detailed plans and maps, and related comments are available at the department's address for review and/or copying. The department's address is:

Tennessee Department of Environment & Conservation  
Division of Water Pollution Control, Natural Resources Section  
7th Floor L & C Annex  
401 Church Street  
Nashville, TN 37243

**PERMIT COORDINATOR:** Robert Baker



